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Amendments to the Claims

1. (Cancelled)

2. (Currently amended) The method of claim ~~70~~ 9, wherein the cardiac muscle tissue is ischemic cardiac muscle tissue.

3-4 (Cancelled)

5. (Currently amended) The method of claim ~~70~~ 9, wherein the cardiac muscle tissue is damaged cardiac muscle tissue.

6. (Cancelled)

7. (Previously amended) The method of claim 5, wherein the damaged cardiac muscle tissue is an artificially created site.

8. (Cancelled)

9. (Currently amended) ~~The~~ A method of ~~claim 8~~ forming new blood vessels in cardiac muscle tissue in a subject, wherein the ~~mammal~~ subject is a human, which comprises:

   a) isolating autologous bone marrow-mononuclear cells from the human; and

   b) transplanting locally into the cardiac muscle tissue an effective amount of the autologous bone-marrow mononuclear cells, resulting in formation of new blood vessels in the cardiac muscle tissue.

10. (Currently amended) The method of claim ~~70~~ 9, wherein the new blood vessels comprise capillaries.

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11. (Currently amended) The method of claim ~~70~~ 9, wherein the new blood vessels comprise collateral vessels.

12. (Cancelled)

13. (Currently amended) The method of claim ~~71~~ 22, wherein the new blood vessels comprise capillaries.

14. (Currently amended) The method of claim ~~71~~ 22, wherein the new blood vessels comprise collateral blood vessels.

15. (Currently amended) The method of claim ~~71~~ 22, wherein the cardiac muscle tissue is ischemic cardiac muscle tissue.

16-17 (Cancelled)

18. (Currently amended) The method of claim ~~71~~ 22, wherein the cardiac muscle tissue is damaged cardiac muscle tissue.

19. (Cancelled)

20. (Previously amended) The method of claim 18, wherein the damaged cardiac muscle tissue is an artificially created site.

21. (Cancelled)

22. (Currently amended) A ~~The~~ method of ~~claim 21~~, of increasing blood flow to cardiac muscle tissue in a subject, wherein the ~~mammal~~ subject is a human, which comprises:

a) isolating autologous bone-marrow mononuclear cells from the human;

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and

b) transplanting locally into the cardiac muscle tissue an effective amount of the autologous bone-marrow mononuclear cells so as to result in formation of new blood vessels in the cardiac muscle tissue, thereby increasing the blood flow to the cardiac muscle tissue in the human.

23. (Cancelled)

24. (Currently amended) The method of claim ~~72~~ 31, wherein the diseased cardiac muscle tissue is ischemic cardiac muscle tissue.

25-27 (Cancelled)

28. (Currently amended) The method of claim ~~72~~ 31, wherein the new blood vessels comprise capillaries.

29. (Currently amended) The method of claim ~~72~~ 31, wherein the new blood vessels comprise collateral blood vessels.

30. (Cancelled)

31. A ~~The~~ method of ~~claim 30~~ treating diseased cardiac muscle tissue in a subject, wherein the ~~mammal~~ subject is a human, which comprises:.

a) isolating autologous bone-marrow mononuclear cells from the human; and

b) transplanting locally into the diseased cardiac muscle tissue an effective amount of the autologous bone-marrow mononuclear cells so as to result in formation of new blood vessels, thereby treating the diseased cardiac muscle tissue in the human.

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32. (Cancelled)

33. (Currently amended) The method of claim ~~73~~ 38, wherein the diseased cardiac muscle tissue is ischemic cardiac muscle tissue.

34-36 (Cancelled)

37. (Cancelled)

38. (Currently amended) A ~~The~~ method of ~~claim 37~~ increasing angiogenesis in diseased cardiac muscle tissue in a subject, wherein the ~~mammal~~ subject is a human, which comprises:

a) isolating autologous bone-marrow mononuclear cells from the human; and

b) transplanting locally into the diseased cardiac muscle tissue an effective amount of the autologous bone-marrow mononuclear cells, thereby increasing angiogenesis in the diseased cardiac muscle tissue in the human.

39. (Cancelled)

40. (Currently amended) The method of claim ~~39~~ 43, wherein the new blood vessels comprise capillaries.

41. (Currently amended) The method of claim ~~39~~ 43, wherein the new blood vessels comprise collateral blood vessels.

42. (Cancelled)

43. (Currently amended) A ~~The~~ method of ~~claim 42~~ treating heart failure in a mammal, wherein

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the ~~mammal~~ subject is a human, which comprises:

a) isolating autologous bone-marrow mononuclear cells from the human; and

b) transplanting locally into the heart an effective amount of the autologous bone-marrow mononuclear cells so as to result in formation of new blood vessels, thereby treating heart failure in the human.

44-69 (Cancelled)

70. (Cancelled)

71. (Cancelled)

72. (Cancelled)

73. (Cancelled)